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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/888,572	06/26/2001	Graeme R. Smith	SMITH=11	1761
1444	7590	02/09/2006	EXAMINER	
BROWDY AND NEIMARK, P.L.L.C.			MICHALSKI, JUSTIN I	
624 NINTH STREET, NW			ART UNIT	
SUITE 300			PAPER NUMBER	
WASHINGTON, DC 20001-5303			2644	

DATE MAILED: 02/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/888,572	SMITH, GRAEME R.	
	Examiner	Art Unit	
	Justin Michalski	2644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29,31 and 32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29,31 and 32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 21 November 2005 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2, 8, 28, and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Martel et al. (Hereinafter "Martel") (US Patent 5,887,165).

Regarding Claim 1, Martel discloses (a) one or a plurality of reconfigurable circuit means (Fig. 1, gate array 13) which are configured in real time (Col. 1, lines 63-67)

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under control of configuration data allowing said reconfigurable circuit means to implement in hardware different signal processing functions required for different digital signal processing algorithms (i.e. reconfigurable), the reconfigurable circuit means being reconfigured at a rate that ensures that data input from at least one of a plurality of input channels and output from at least one of a plurality of output channels is processed in accordance with the required sampling rate or sampled data rate in a way that does not cause any signal aliasing and minimizes noise artifacts on any of the operative input and output channels in relation to the selected signal processing functions to be performed (input and output of computers 33 and 35; note: there is nothing in the claims that links the input and output channel to any specific means); (b) a local memory coupled to said reconfigurable circuit means, said local memory storing the configuration data and being operative to supply configuration data to said reconfigurable circuit means when a different signal processing function is to be performed (memory 19); and (c) a host processor (CPU 17) and associated program memory means (15) for updating configuration data in said local memory and controlling and monitoring operation of the apparatus.

Regarding Claim 2, Martel further discloses memory (19 and 15).

Regarding Claim 8, Martel further discloses wherein the apparatus is configured for simultaneous use by more than one user where signal data from one or more signal sources is processed and output to separate peripheral units (computers 33 and 35).

Regarding Claim 28, Martel further discloses some of the reconfigurable circuit means are configured to implement functions and algorithms normally performed in

peripheral equipment (17), allowing new peripheral equipment which operates with said modular and software definable pre-amplifier apparatus to have reduced functionality.

Regarding Claim 32, Martel further discloses said device is modular (25, 33, and 35).

4. Claims 1, 2, 7, 11, 19, 29, and 31 are rejected under 35 U.S.C. 102(e) as being anticipated by O'Brien (US Patent 6,107,876).

Regarding Claim 1, O'Brien discloses (a) one or a plurality of reconfigurable circuit means which are configured in real time (ASIC circuitry, Col. 3, lines 58-64) under control of configuration data allowing said reconfigurable circuit means to implement in hardware different signal processing functions required for different digital signal processing algorithms (i.e. various topologies, Col. 3, lines 63-64), the reconfigurable circuit means being reconfigured at a rate that ensures that data input from at least one of a plurality of input channels and output from at least one of a plurality of output channels is processed in accordance with the required sampling rate or sampled data rate in a way that does not cause any signal aliasing and minimizes noise artifacts on any of the operative input and output channels in relation to the selected signal processing functions to be performed (input from 23 and output of 24; note: there is nothing in the claims that links the input and output channel to any specific means); (b) a local memory coupled to said reconfigurable circuit means, said local memory storing the configuration data and being operative to supply configuration data to said reconfigurable circuit means when a different signal processing function is to be

performed (It is inherent that digital circuitry such as ASIC will contain memory); and (c) a host processor (O'Brien discloses a DSP or "host processor"; Col. 1, lines 53-55) and associated program memory means (It is inherent that DSP and ASIC will contain amounts of memory) for updating configuration data in said local memory and controlling and monitoring operation of the apparatus.

Regarding Claim 2 and 29, it is inherent that the DSP and ASICs will contain memory means for storing digitized audio data signals from Fig. 1, input 12.

Regarding Claim 6, O'Brien further discloses the circuitry is comprised of ASIC circuits (Col. 2, lines 19-28).

Regarding Claim 7, O'Brien further discloses that the circuitry is implemented in ASIC and configurable (Col. 3, lines 58-64).

Regarding Claim 11 O'Brien further discloses an A/D converter (Fig. 1, converter 70).

Regarding Claim 19, O'Brien further discloses digital switching means are employed to route and transfer data from the apparatus (Col. 4, lines 9-15).

Regarding Claim 31, O'Brien further discloses software definable logic blocks including memory and digital signal processors (Col. 1, lines 54-46; memory inherent in ASICs) determined by user inputs, i.e. flexibility in choosing various operating parameters (Col. 3, lines 58-64).

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5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Brien as applied to claim 1 above in view of Greif (WO 97/02570).

Regarding Claim 3, O'Brien discloses a device as stated apropos of claim 1 above but does not disclose mezzanine card modules that allow the apparatus to be expanded or upgraded. Greif discloses an expandable multi media terminal unit for use in digital audio and multiple protocols, i.e. RDS and MPEG (Page 2, paragraph 7) which will inherently contain memory and a signal processor in order to process the digital information. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use mezzanine modules to allow use of multiple protocols as taught by Greif.

Regarding Claim 14, O'Brien further discloses the circuitry based on programmable logic, i.e. FPGA (Col. 3, lines 58-63).

7. Claims 4, 5, 9, 12, 13, 17, 18, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Brien as applied to claim 1 above in view of Wang et al. ("Wang") (US Patent 5,765,027).

Regarding Claim 4, O'Brien discloses a device as stated apropos of claim 1 above but does not disclose modem means allowing internet access. Wang also disclose a ASIC device (Col. 2, lines 19-28) comprising a modem (Fig. 1, reference 120) to allow communication with a local area network, i.e. internet (Col. 2, lines 19-28). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include modem means in order to allow communication with a area network to transfer information as taught by Wang.

Regarding Claim 5, Wang further discloses the flash memory and PCMCIA cards: type I (Col. 1, lines 36-49).

Regarding Claim 9, Wang further discloses modem (Fig. 1, 120) is external to device 100.

Regarding Claim 12, Wang further discloses wireless communication means (RF communication module (Fig.1, 120).

Regarding Claim 13, Wang further discloses wireless communication module 120. It is well known in the art that IEEE 802.11 is a standard communication protocol and it would have been obvious to one of ordinary skill in the art at the time the invention was made to include IEEE 802.11 as a communication protocol to transfer information by wireless means.

Regarding Claim 17, Wang further discloses PCMCIA architecture found in PC computer and communicating on a local area network, i.e. download and upload (Col. 2, lines 19-37).

Regarding Claim 18, Wang further discloses remote control means (Col 2, lines 30-46).

Regarding Claim 25, Wang further discloses peripheral units situated remotely (Col. 2, lines 30-46).

8. Claims 10 and 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over O'Brien as applied to claim 1 above in view of Todter et al. ("Todter") (US Patent 5,937,070).

Regarding Claim 10 O'Brien discloses a device as stated apropos of claim 1 above but does not disclose remote microphone means to adapt to acoustical settings. Todter discloses remote microphones (Fig. 5) to detect and cancels ambient noise (Col. 1, lines 15-23). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include remote microphones to detect and cancel ambient noise.

Regarding Claim 15 Todter further discloses implementation to reduce reverberant noise (Col. 15, lines 5-10).

9. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over O'Brien as applied to claim 1 above in view of Keir (US Patent 5,467,400).

O'Brien discloses a device as stated apropos of claim 1 above but does not disclose emulation of a valve amplifier. Keir discloses that valve amplifiers are highly regarded for their sound quality and emulation of the sound characteristics of valve

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amplifiers (Col. 1, lines 1-30). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to emulate a valve amplifier for its high sound quality as taught by Keir.

10. Claims 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Brien as applied to claim 19 above in view of McLaughlin et al ("McLaughlin") (US Patent 3,931,474).

Regarding Claims 20-22, O'Brien discloses a device as stated apropos of claim 19 above but does not disclose cross bar switching. McLaughlin discloses cross bar switching being a common control type for establishing a path between two stations (Col. 1, lines 20-25). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include cross bar switching common switching system to route signals to destinations as taught by McLaughlin.

11. Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Brien as applied to claim 1 above in view of Ledermann (US Patent 6,278,784).

Regarding Claim 23 and 24 O'Brien discloses a device as stated apropos of claim 1 but does not disclose CD or DVD storage means. It is well known in the art that CD and DVD are means of storing audio information. (See Ledermann Col. 1, lines 14-20). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use CD and DVD means as a way of storing audio information.

12. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over O'Brien/Greif as applied to claim 3 above in further view of Juskiewicz et al. ("Juskiewicz") (US Patent 6,353,169).

O'Brien/Greif discloses a device as stated apropos of claim 1 above but does not disclose the cards being hot swappable. Juskiewicz discloses an amp with rack units being hot swappable for maintenance and replacement (Col. 8, lines 11-14). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use hot swappable units to facilitate maintenance and replacement as disclosed by Juskiewicz.

13. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over O'Brien/Greif as applied to claim 3 above in view of Suggs (US Patent 6,064,743).


O'Brien/Greif disclose a device as stated apropos of claim 3 above but do not disclose the device being a plug-n-play device. Suggs discloses a plug-n-play device to provide compatibility with existing standard or popular hardware and software applications (Col. 14, lines 16-25). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include plug-n-play to provide compatibility with existing hardware and software applications as taught by Suggs.


Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin Michalski whose telephone number is (571)272-7524. The examiner can normally be reached on M-F 7-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on (571)272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JIM

January 31, 2006


HUYEN LE
PRIMARY EXAMINER